PARFENOV, A.P., Cand Med Sci -- (diss) "Changes in the electrocardiogram during lung surgery." Mos, 1959, 12 pp (First Mos Order of Lenin Med Inst im I.M. Sechenov) 200 copies (KL, 35-59, 116)

PARFENOV, A.P.

Program issued by the Society lists the following authors and titles of papers:

USSR

DOROSHENKO, I.M., Professor, Odessa, "How natural sulfate fluids behave in the upper respiratory tracts"

MEN'SHIKOV, Fedor K., Professor, Institute of Nutrition, Moscow, "Dietetic treatment of ulcerous disease"

PARFENOV, A. P., Professor, Leningrad Tuberculosis Institute, "Light hunger in man"

Report to be submitted for...
PRAGUE, CZECHOSLOVAKIAN SOCIETY OF...
19th International Post-Graduate Medical Course - Carlsbad, Czechoslovakia, 14-19 Sep 59

PARFENOV, Aleksandr Prokhorovich, prof.; MAYSTRAKH, Ye.V., red.; SHEVCHENKO, F.Ya., tekhn. red.

[Human resistance] Zakalivanie cheloveka. Leningrad, Medgiz, 1960. 268 p. (MIRA 15:6)
(ADAPTATION (BIOLOGY)) (ACCLIMATIZATION)

KOVANEV, V.P.; PARFENOV, A.P.

Effect of hydrocortisone on vascular tone in operations on the heart. Vest. AMN SSSR 15 no. 11:46-54 '60. (MIRA 13:12)

1. Institut grudnoy khirurgii AMN SSSR.
(HEART—SURGERY) (CORTISONE) (BLOOD VESSELS)

PARFENOV, A.P., doktor med.nauk, prof. (Leningrad)

Hardening. Med. sestra 19 no.5:39-41 My '60. (MIRA 13:9)
(PHYSICAL EDUCATION AND TRAINING)

PARFENOV, A.P.; SMIRENSKAYA, Ye.M.

Change in the vascular tonus during operations on the cardiovascular system. Grud.khir. 3 no.6:43-48 N-D '61. (MIRA 15:3)

1. Iz laboratorii klinicheskoy fiziologii (zav. - prof. A.G. Bukhtiyarov; nauchnyy rukovoditel' - akad. A.N. Bakulev). Adres avtorov: Moskva, Leninskiy pr., d.8, Institut serdechno-sosudistoy khirurgii AMN SSSR.
(NERVOUS SYSTEM, VASOMOTOR) (CARDIOVASCULAR SYSTEM--SURGERY)

PARFENOV, A.P., prof.

"Instructions on the methods of climatotherapy in health resorts, sanatoriums, and rest homes" by A.S.Bishnevskii, N.A.Nevraev. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.4:370-371 Jl-Ag '61. (MIRA 15:1)

(CLIMATOLOGY, MEDICAL) (BISHNEVSKII, A.S.)
(NEVRAEV, N.A.)

STAROBINSKIY, I.M., prof.; OBROSOV, A.N., prof.; KANEVSKIY, G.L., prof.; MILITSYN, V.A., prof.; PARFENOV, A.P., prof.

Resolution of the All-Union Methodological Conference on Problems in the Teaching of Physical Therapy in the Medical Institutes and in the Institutes for Advanced Training of Physicians (Leningrad, January 27-28, 1961). Vop. kur., fizioter. i lech. fiz. kul't. 26 no.4:373-376 Jl-Ag '61. (MIRA 15:1)

1. Chlen-korrespondent AMN SSSR (for Obrosov).
(PHYSICAL THERAPY--STUDY AND TEACHING)

PARFENOV, A.P., kand.med.nauk

Use of noradrenaline in combined treatment of shock in terminal conditions in patients with diseases of the heart, lungs, and esophagus. Khirurgiia 37 no.4:18-22 '61. (MIRA 14:4)

1. Iz laboratorii klinicheskoy fiziologii (zav. - prof. A.G. Bukhtiyarov) Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad. A.N. Bakulev) AMN SSSR.
(SHOCK) (NORADREALINE) (RESUSCITATION)

ZOL'NIKOV, S.M., kand.med.nauk; PARFENOV, A.P.; ROSLAVLEVA, N.G.; KUPRIYANOV, S.S.

Stimulation of the central nervous system with megimide during heart surgery. Khirurgiia no.9:63-66 '62. (MIRA 15:10)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad. A.N.Bakulev) AMN SSSR.
(GLUTARIMIDE) (HEART--SURGERY)

ZOL'NIKOV, S.M., kand.med.nauk; PARFENOV, A.P.; DUDKO, A.M.; VOINOVA, I.I.

Basal anesthesia in patients with serious diseases of the cardiovascular system. Klin.khir. no.9:45-49 S '62. (MIRA 16:5)

1. Institut sedechno-sosudistoy khirurgii AMN SSSR (nauchnyy rukovoditel' - akademik A.N. Bakulev). Adres Zol'nikova: Moskva, Leninskiy prosp., d.8, Institut serdechno-sosudistoy khirurgii AMN SSSR.
(ANESTHESIA) (CARDIOVASCULAR SYSTEM—DISEASES)

PARFENOV, A.P., inzh., NIFANT'YEV, A.B., inzh., VERETENNIKOV, V.A., inzh.

Using pipe-laying machinery in assembling mine hoisting equipment. Shakht. stroi. 8 no.9:25 S '64. (MIRA 17:12)

1. Korkinskoye stroitel'no-montazhnoye upravleniye tresta Soyuzshakhtospetsmontazh (for Parfenov). 2. Shakhta No.4 tresta Kopeyskugol' (for Nifant'yev, Veretennikov).

GENIN, N.M.; ZOL'NIKOV, S.M.; PARFENOV, A.I.; KHAYT, N.M.; [illegible]

Changes in some hemodynamic and electrocardiographic indices in repeated mitral commissurotomy. Khirurgiia 40 no.1:58-65 Ja '64.
(MIRA [illegible])

1. Institut serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR.

PARFENOV, Aleksandr Prokhorovich, prof.; TOLSTOV, I.N., red.izd-va; GURDZHIYEVA, A.M., tekhn. red.

[Healing properties of nature] TSelebnye svoistva prirody. Leningrad, Ob-vo po rasprostraneniiu politicheskikh i nauchn. znanii RSFSR, 1963. 42 p. (MIRA 16:12)
(NATURE, HEALING POWERS OF)

PARFENOV, Aleksandr Prokhorovich; RAVKIND, B.M., red.; LEBEDEVA, G.T., tekhn. red.

[Effect of the lack of sunshine on man] Solnechnoe golodanie cheloveka. Leningrad, Medgiz, 1963. 191 p. (MIRA 16:10)
(SOLAR RADIATION--PHYSIOLOGICAL EFFECT)

ZOL'NIKOV, S.M.; GOLUBEV, I.S., kand. med. nauk; KARPENKO, A.I., kand. med. nauk

Use of pyridoxine in patients with rheumatic heart defects and its influence on anesthesia. Khirurgiia 40 no.7:23-28 Jl '64.

(MIRA 18:2)

1. Institut serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR, Moskva.

PARFENOV, A.P., prof.

Letter to the editos. Vop.kur., fizioter. i lech. fiz. kul't. 28 no.2:176 Mr-Ap'63. (MIRA 16:9)
(ELECTROPHORESIS)

PARFENOV, A.P.; TARASENKO, T.I.

Anesthesia of the human skin by novocaine and adrenalin electrophoresis. Vop. kur. fizioter., i lech. fiz. kul't. 28 no.3:247-250 My-Je '63. (MIRA 17:6)

1. Iz kafedry fiziologii, gistologii i lechebnoy fizicheskoy kul'tury Voyenno-[illegible] im. Kirova.

PARFENOV, A.P., inzh.; NIFANT'YEV, A.D., inzh.; VERETENNIKOV, [illegible], inzh.

Efficient method of pipeline assembly in horizontal and inclined workings. Shakht. stroi. 8 no.8:28 Ag '64. (MIRA 17:9)

1. Korkinskoye stroitel'no-montazhnoye upravleniye tresta Sovetskugol' spetsmontazh (for Parfenov). 2. Shakhta No.47 tresta Kopeyskugol' (for Nifant'yev, Veretennikov).

PARFENOV, A.S.

Working soil by means of shearing. Izv.vys.ucheb.zav.; stroi. i arkhit 4 no.6:121-125 '61. (MIRA 15:2)

1. Sibirskiy avtomobil'no-dorozhnyy institut imeni V.V. Kuybysheva.

(Earthwork)

PARFENOV, A. S.

PARFENOV, A. S. --"Experimental Study of the Process of Excavation by Drop Cleaving." (Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions)(29) Min Higher Education USSR, Moscow Automobile Roads Inst imeni V. M. Molotov, Moscow, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Candidate in Technical Sciences

1. PARFENOV, A. T.

2. USSR (600)

4. Gallflies

7. Bud-galls are a new nursery pest. Sad i og. no. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

PARFENOV, A.T.

USSR/General and Special Zoology. Insects. Injurious Insects and Ticks. Pests of Fruit and Berry Crops P

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49629

Author : Livshits I.Z., Petrushova N.I., Parfenov A.T. Maksimov F.N.

Inst : State Nikita Botanical Garden

Title : New Acaricides in the Control of the Brown Fruit Mite (Preliminary Report).

Orig Pub : Byul. nauchno-tekhn. inform. Gos. Nikitsk. botan. sad, 1957, No 2, 7-12

Abstract : Ether sulfonate of 0.2-0.3% is highly toxic against the eggs and larvae of the mite and retains its action for a long time. The most suitable time for spraying are the periods of the emergence of first and second generation larvae. The use of DDT suspension against the leaf-roller moth was combined with acaricide

Card : 1/2

PARFENOV, A.T.

Control of pests and diseases of fruit crops. Kons. i ov. prom. 13 no.9:34-37 S '58. (MIRA 11:10)

1. Krymskaya opytnaya stantsiya sadovodstva.
(Fruit--Diseases and pests)

PARFENOV, A. T.

Fruit Culture

Formation of apple trees in the nursery., Sad i og., no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

PARFENOV, A. T.

Apple

Formation of apple trees in the nursery Sad i og. No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

PARFENOV, A. Ya

KAPELINSKIY, Yu.N.; POLYANIN, D.V.; MENZHINSKIY, Ye.A.; IVANOV, I.D.; SERGEYEV, Yu.A.; KOSTYUKHIN, D.I.; DUDUKIN, A.N.; IVANOV, A.S.; FINOGENOV, V.P.; ZAKHMATOV, M.I.; SOLODKIN, R.G.; DUSHEN'KIN, V.N.; BOGDANOV, O.S.; SEROVA, L.V.; GONCHAROV, A.N.; KARKHIN, G.I.; LYUBSKIY, M.S.; PUCHIK, Ye.P.; SEROVA, L.V.; KAMENSKIY, N.N.; SABEL'NIKOV, L.V.; FEDOROV, B.A.; GERCHIKOVA, I.N.; KARAVAYEV, A.P.; KARPOV, L.N.; SHIPOV, Yu.P.; VLADIMIRSKIY, L.A.; KUTSENKOV, A.A.; RYABININA, E.D.; ANAN'YEV, P.G.; ROGOV, V.V.; BELOSHAPKIN, D.K.; SEYFUL'MULYUKOV, A.M.; PARFENOV, A.Ya.; SMIRNOV, V.P.; ALEKSEYEV, A.F.; SHIL'IKROT, V.A.; CHURAKOV, V.P.; BORISENKO, A.P.; ISUPOV, V.T.; ORLOVA, N.V., red.; GORYUNOVA, V.P., red.; BELOSHAPKIN, D.K., red.; GEORGIYEV, Ye.S., red.; KOSAREV, Ye.A., red.; KOSTYUKHIN, D.I., red.; MAYOROV, B.V., red.; PANKIN, M.S., red.; PICHUGIN, B.M., red.; POLYANIN, D.V., red.; SOLODKIN, R.G., red.; UFIMOV, I.S., red.; EKHIN, P., red.; SMIRNOV, G., tekhn.red.

[Economy of capitalist countries in 1957] Ekonomika kapitalisticheskikh stran v 1957 godu. Pod red. N.V.Orlova, IU.N.Kapelinskogo i V.P.Goriunova. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1958. 686 p. (MIRA 12:2)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Economic conditions)

L 41036-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/WW/JG/WB

ACC NR: AP6013727 (N) SOURCE CODE: UR/0089/66/020/004/0330/0333

45
B

AUTHOR: Lupakov, I. S.; Parfenov, B. G.; Gromova, A. I.

ORG: none

TITLE: The influence of heat treatment on the corrosion resistance of zirconium alloys

SOURCE: Atomnaya energiya, v. 20, no. 4, 1966, 330-333

TOPIC TAGS: corrosion resistance, annealing, zirconium, niobium containing alloy, metal heat treatment, nuclear reactor material

ABSTRACT: The authors investigate the influence of heat treatment conditions on the corrosion stability of zirconium alloys containing 1.0 and 2.5% of niobium. These alloys have been developed in the Soviet Union for nuclear reactors. Results cover the corrosion of zirconium alloys in vapor at 400C and 100 atm and the appearance of samples held 950 hr. at high temperature-high pressure conditions. The authors investigate double annealing, annealing for 30 min at 700C, 50% cold rolling without and with 10 min 560C, and 30 min 700C annealing. An analysis of the results shows that the best corrosion resistance is achieved by double annealing. The effect is the strongest in zirconium alloy with 2.5% Nb. Orig. art. has: 2 figures.

Card 1/2 UDC: 669.018.8:546.831

L 41036-66

ACC NR: AP6013727 O

SUB CODE: 11,18/ SUBM DATE: 29May65/ ORIG REF: 002/ OTH REF: 007

Card 2/2

AL'TSHULLER, G.B.; PARFENOV, B.G.

Special features in controlling the frequency of quartz oscillators.
Elektrosviaz' 18 no.8:31-37 Ag '64. (MIRA 17:8)

PARFENOV, B.S., podpolkovnik med. sluzhby

Immediate results of the treating of spondylosis deformans at the spa of Pyatigorsk. Voen.-med. zhur. no.5:46-49 My '57 (MIRA 12:7)
(SPODYLITIS, ANKYLOSING, therapy,
balneother. (Rus))
(BALNEOLOGY, in var. dis.
spondylitis, ankylosing (Rus))

L 2484l-66 EWT(d)/EWT(m)/T/EWP(1) IJP(c) BB/DJ/GG/ME

ACC NR: AP6006367 SOURCE CODE: UR/0413/66/000/002/0099/0099

AUTHORS: Khusid, A. Z.; Grishin, V. A.; Parfenov, B. P.; Vlasov-Vlasyuk, O. B.

ORG: none

TITLE: An electric analog device. 16 Class 42, No. 178121

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 99

TOPIC TAGS: analog system, electric analog, hydraulic equipment, engine control system

ABSTRACT: This Author Certificate presents an electric analog device for studying and adjusting the regulators of piston engines and gas turbine engines. The device contains an electronic model of the object of regulation and input and output converters for coupling the model of the object with the real apparatus (see Fig. 1). The design reproduces the dynamic characteristics of the piston engine and the gas turbine engine. It contains a hydraulic volume drive with its input connected through the coupling converters to the electronic model of the object being regulated. The output shaft of the hydraulic volume drive is connected with the shaft of the test regulator. To eliminate "an addition" of the RPM's with an increase of the fuel supply, the device contains two hydraulic volume

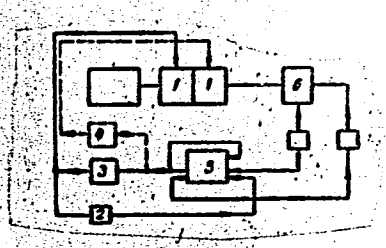
Card 1/2

UDC: 681.142

L 24841-66

ACC NR: AP6006367

Fig. 1. 1 - hydraulic volume drive; 2 - 4 - converters; 5 - electronic model of the object of regulation; 6 - regulator.



drives. The output shaft of one of the drives is connected with the shaft of the fuel pump. The output shaft of the second drive is connected with the shaft of the test regulator. Orig. art. has: 1 figure.

SUB CODE: 09,21,8/SUBM DATE: 18Sep64

Card 2/2 cda

L 35054-66 EWT(l)/EWP(m)/EWT(m)/ETC(F)/EWG(m)/EWA(d)/T/ETC(m)-6/EWA(l) DS/WW
ACC NR: AP6003203 SOURCE CODE: UR/0382/65/000/004/0050/0052

AUTHOR: Parfenov, B. V.; Regirer, S. A.

ORG: none

TITLE: The flow of electrolyte in a circular tube in the presence of a magnetic field

SOURCE: Magnitnaya gidrodinamika, no. 4, 1965, 50-52

TOPIC TAGS: electrolyte, Reynolds number, transverse magnetic field, MHD flow

ABSTRACT: The electrolyte (a solution of 10% hydrochloric acid in water) was circulated through round tubes of varying diameter (from .35 to 3.0 cm). Both glass and plastic were used as tube material; the other parts of the experimental apparatus were also made of nonconducting materials. The flow parameters are given in terms of Hartmann and Reynolds numbers for tubes with smooth and rough internal surfaces. It was noted that even in absence of the magnetic field, parasite potentials developed across measuring electrodes, thus complicating the measurement procedures. All measurements of the induced potential differences arising from the

Card 1/2 UDC: 538.4

L 15614-66

ACC NR: AP6003203

presence of the magnetic field were conducted at laminar flow and transitions to the turbulent flows. No noticeable difference in the accuracy due to change from laminar to turbulent flow was observed. Results of experiments agree with the theoretical formula derived by R. R. Gold (J. Fluid Mech., 1962, 13, 4, 505) for an infinitely long tube. The authors thank G. R. Alanidze for his great service in conducting and analyzing the experiments. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 16Mar65/ ORIG REF: 001/ OTH REF: 005

Card 2/2

1. PARFENOV, D.

2. USSR (600)

4. Work

7. Elimination of the opposition between mental and manual labor in the U.S.S.R. and ways to do away with the diversity between them. Vop. ekon. No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

SMIRNOV, Anatoliy Filippovich, doktor tekhn. nauk, prof.; ALEKSANDROV, Anatoliy Vasil'yevich, kand. tekhn. nauk, dots.; MONAKHOV, Nikolay Ivanovich, kand. tekhn. nauk, dots.; PARFENOV, Dionisiy Fedorovich, dots.; SKRYABIN, Aleksandr Ivanovich, kand. tekhn.nauk, dots.; FEDORKOV, Georgiy Vasil'yevich, kand. tekhn. nauk, dots.; KHOLCHEV, Vasiliy Vasil'yevich, kand. tekhn. nauk, dots.; DARKOV, A.V., prof., retsenzent; STARSHINOV, K.K., kand. tekhn.nauk, retsenzent; BURCHAK, G.P., kand. tekhn.nauk, red.; VERINA, G.P., tekhn. red.

[Strength of materials] Soprotivlenie materialov. Moskva, Vses. izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1961. 591 p. (MIRA 14:12)

1. Chlen-korrespondent Akademii Stroitel'stva i Arkhitektury SSSR (for Smirnov).

(Strength of materials)

PARFENOV, Dmitriy Andreyevich; KORNIYENKO, V., red.; KOROLEVA, A., mladshiy red.; KORNILOVA, V., tekhn. red.

[Intellectual and physical work in the U.S.S.R.; the economic prerequisites for overcoming the essential differences] Umstvennyi i fizicheskii trud v SSSR; ekonomicheskie predposylki preodoleniia sushchestvennykh razlichii. Moskva, Izd-vo "Mysl'," 1964. 143 p. (MIRA 17:3)

PARF"NOV, D. L.

"Investigation of the E'fect of Conditions of Breaking on the Formation of Linen Fabric." Sub 10 Jan 52, Moscow Textile Inst

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

PARFENOV, D. L.

Weaving

Breaking of flax yarn. Tekst. prom. 12 no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, 2Uncl.

PAIFENOV, D. L.

Linen

Breaking of flax yarn. Tekst. prom., 12, No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

PARFENOV, D.L.

Value of the angle of the pick in the process of the formation of fabrics. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.1: 80-85 '64. (MIRA 17:5)

1. Kostromskoy tekhnologicheskiy institut.

PARFENOV, D.S.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1899
AUTHOR KOMEL'KOV, V.S., PARFENOV, D.S.
TITLE The Broadening of the Spark Channel in Air at Amperages of about 2.10^6 Ampères.
PERIODICAL Dokl. Akad. Nauk, 111, fasc. 6, 1215-1218 (1956)
Issued: 2 / 1957

The spark channel investigated was created in an air interval on the occasion of the shock-like discharge of an electric circuit formed by 48 condensers at an operation voltage of 50 kilovolts and a total capacity of 132 microfarad. Investigations were carried out at a voltage of 40.000 V in the circuit, on which occasion up to $1,7.10^6$ ampère was attained in the spark with an initial steepness of 10^{12} ampère/sec. With 50.000 V in the electric circuit amperage attained 2.10^6 ampères. Measuring voltage and amperage is discussed. The broadening of the channel takes place in four characteristic phases which may easily be recognized on the attached photos and kerrograms. During the first phase, which sometimes has a duration of 0,7 microseconds, the channel broadens more rapidly than 2.10^6 cm/sec. The velocity then drops down to 4.10^5 cm/sec. In this stage current density attains the highest values of the entire discharge period (10^7 ampère/cm^2 and more). The discharge channel has a visible boundary during the first phase. In the second phase a new and washed out boundary appears. The boundaries of the outer zone are the direct continuation of the boundaries of the discharge in the first phase and propa-

MAURIT, M.Ye.; SMIRNOVA, G.V.; PARFENOV, E.A.; VINKOVSKAYA, T.M.; PREOBRAZHENSKIY, N.A.

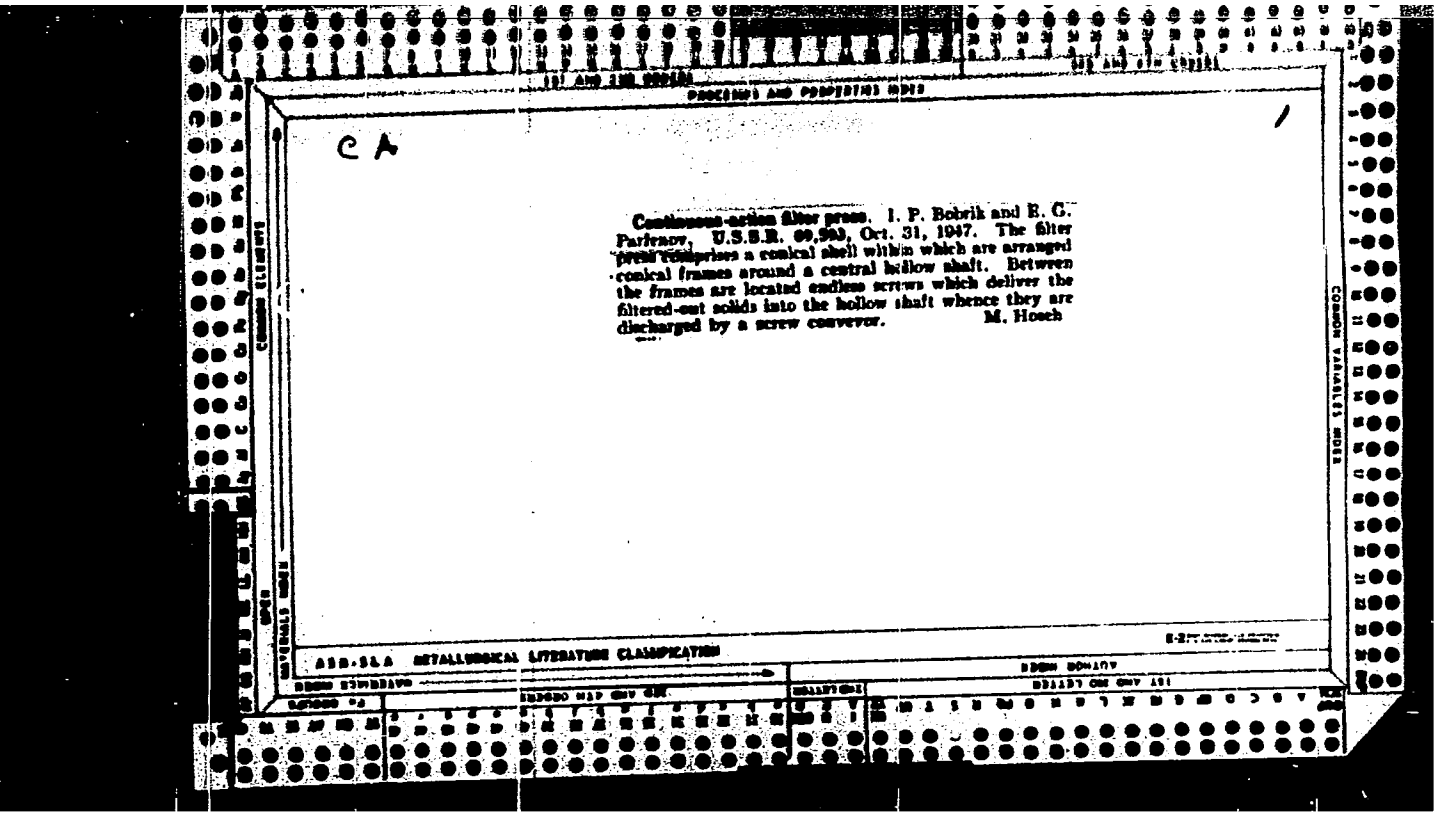
Total synthesis of 3,7,11,15-tetramethyl-1-hexadecen-3-ol (isophytol). Zhur.ob.khim. 32 no.8:2483-2487 Ag '62. (MIRA 15:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.
(Hexadecenol)

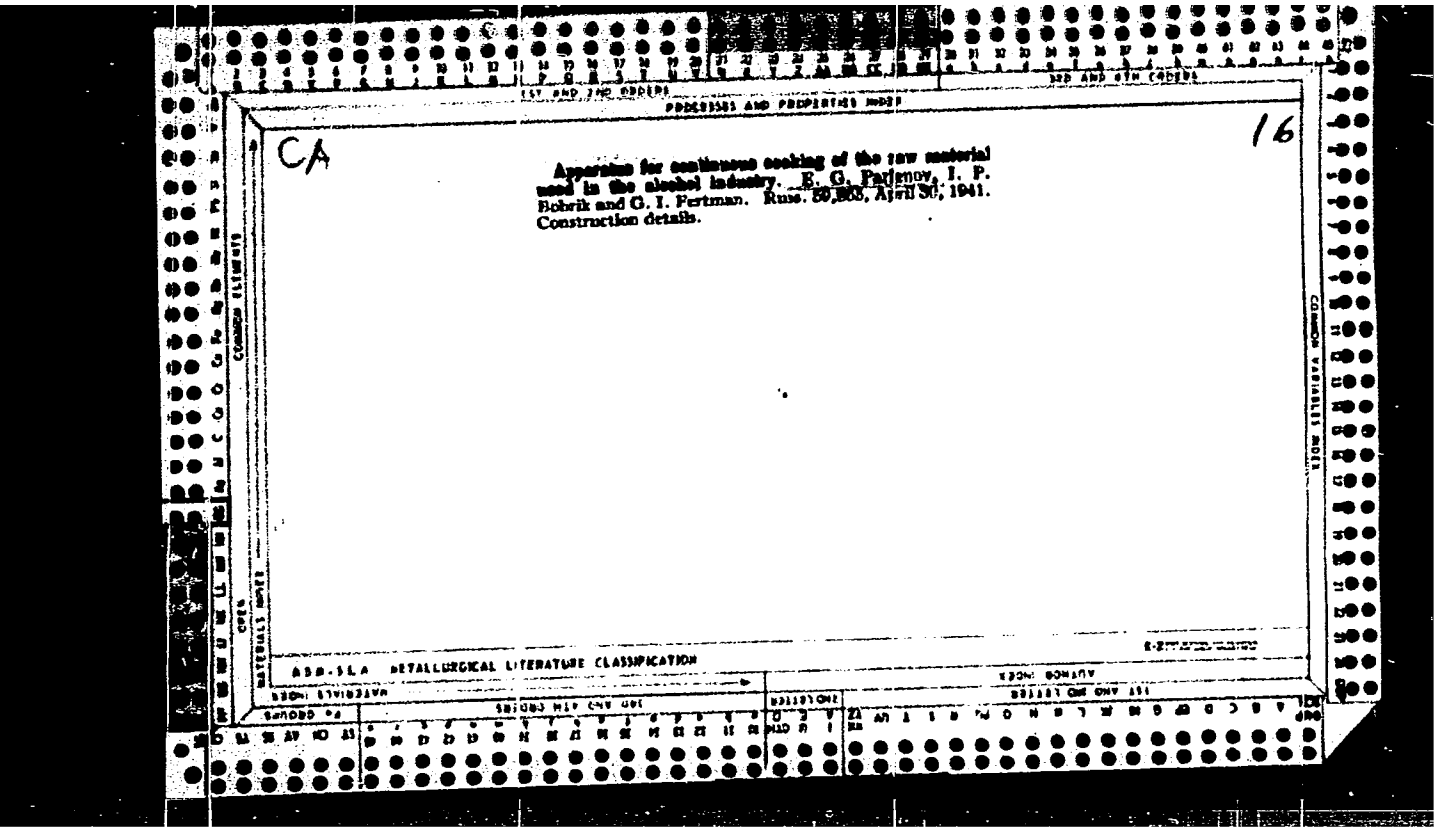
MAURIT, M.Ye.; SMIRNOVA, G.V.; PARFENOV, E.A.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Complete synthesis of 2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-6-oxychromane (vitamin E, α-tocopherol) and its derivatives. Dokl. AN SSSR 140 no.6:1330-1333 O '61. (MIRA 14:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Predstavleno akademikom A.N.Nesmeyanovym.
(Tocopherol)



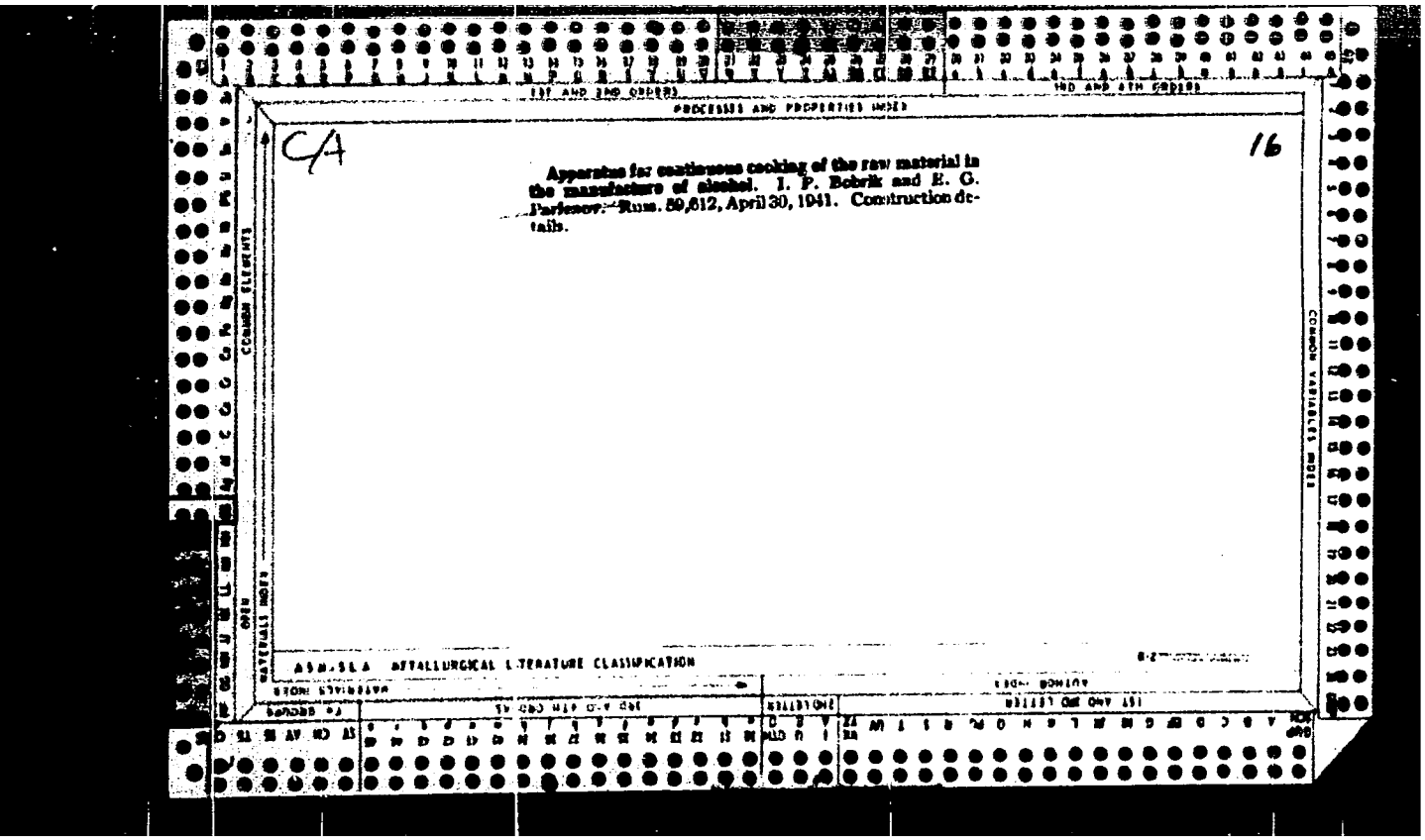
Continuous-action filter press. I. P. Bobrik and E. G. Parfenov, U.S.S.R. 69,593, Oct. 31, 1947. The filter press comprises a conical shell within which are arranged conical frames around a central hollow shaft. Between the frames are located endless screws which deliver the filtered-out solids into the hollow shaft whence they are discharged by a screw conveyor. M. Hosch



CA

16

Apparatus for continuous cooking of the raw material used in the alcohol industry. E. G. Fatjenov, I. P. Bobrik and G. I. Fertman. Russ. 50,868, April 30, 1941. Construction details.



CA

16

Apparatus for continuous cooking of the raw material in the manufacture of alcohol. I. P. Bobrik and E. G. Parfenov. Rus. 50,612, April 30, 1941. Construction details.

ZAVALISHIN, D.A. (Leningrad); BOBROVA, R.F. (Leningrad); PARFENOV, E.Ye. (Leningrad)

Regulation of the angular velocity of large asynchronous electric motors in a cascade network with transistor converters. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.3:51-64 My-Je '62. (MIRA 15:6)

(Electric motors, Induction)

YESAKOV, Vasiliy Petrovich; PARFENOV, Eduard Yevgen'yevich; PROZOROV, Valentin Alekseyevich; LERNER, D.M., red.

[Automated electric drive systems with regulated semiconductor rectifiers] Sistemy avtomatizirovannogo elektroprivoda s upravliaemymi poluprovodnikovymi vypriamiteliami. Leningrad, 1964. 35 p. (MIRA 17:11)

PARFENOV, F., instruktor profilaktiki (Ufa)

Collaborating with workers groups. Pozh.delo 6 no.5:6 My '60.
(MIRA 13:8)
(Distilling industries--Fires and fire prevention)

PARFENOV, G.

Strengthening financial discipline. Fin. SSSR 21 no.1:68-69 Ja '60. (MIRA 13:1)

1.Zaveduyushchiy Sverdlovskim rayfinotdelom Leningrada.
(Leningrad--Finance)

PARFENOV, G.

On persons holding several jobs at one time. Sots. trud. 4 no.10: 131-132 O '59 (MIRA 13:3)

1. Deputat Scerdlovskogo rayonnogo Soveta deputatov trudyashchikhaya Leningrad.
(Leningrad--Labor laws and legislation)

PARFENOV, G.

How we improve financial control. Fin. SSSR 37 no.11:57-59 N'63. (MIRA 17:2)

1. Zaveduyushchiy Vasileostrovskim rayonnym finansovym otdelom Leningrada.

PARFENOV, G.

Reveal hidden potentialities tirelessly. Fin. SSSR 20 no.1:46-48 Ja '59. (MIRA 12:2)

1. Zaveduyushchiy Sverdlovskim rayfinotdelom g. Leningrada.
(Leningrad--Industries)

PARFENOV, G.

Improve the structure of repair and building organizations.
Fin. SSSR 19 no.1:77-78 Ja '58. (MIRA 11:2)

1.Zaveduyushchiy Sverdlovskim rayfinotdelom Leningrada.
(Leningrad--Construction industry)

PARFENOV, G.N.

PARFENOV, G.N., inzhener.

Various types of logging roads. Mekh. trud. rab. 11 no.4:19-20 Ap '57. (MLRA 10:6)

(Forest roads)

YERAKHTIN, D.D., dotsent; PARFENOV, G.M., dotsent.

Means of over-all mechanization of lumbering operations. Mekh. trud. rab. 10 no.9:35-37 S '56. (MLRA 9:10)

(Lumbering--Machinery)

PARFENOV, G.M., dotsent.

Over-all mechanization of all operations in the felling area.
Mekh.i avtom.proiz. 14 no.6:26-28 Je '60. (MIRA 13:7)
(Lumbering--Technological innovations)

PARFENOV, G.M., dots.

Selecting the proper type of lumber transportation. Mekh. trud. rab. 12 no.8:24-27 Ag '58. (MIRA 11:9)
(Lumber--Transportation)

PARFENOV, Gennadiy Makarovich; KONONOV, N.A., red.; KIMMEL', L.S., red.izd-va; PARAKHINA, N.L., tekhn. red.

[Hauling lumber with trucks and motor vehicles without skidding] Bestrelevochnaia vyvozka lesa traktorami i avtomashinami. Moskva, Goslesbumizdat, 1961. 89 p. (MIRA 16:3)
(Lumber--Transportation)

KORCHUNOV, Nikolay Grigor'yevich, prof.; KONAROV, Yuriy Mikhaylovich, dots., kand. tekhn. nauk; KOCHEGAROV, Vasiliy Grigor'yevich, dots, kand. tekhn. nauk; OSIPOV, Petr Yegorovich, dots., kand. tekhn. nauk; ROOS, L.V., dots., kand. tekhn. nauk, retsenzent; RAKHMANOV , S.I., dots., kand. tekhn. nauk, retsenzent; TAGIL'TSEV, N.D., st. prepod., retsenzent; NESTERENKO, V.G., dots., retsenzent; PARFENOV, G.M., dots., retsenzent; PLESKO, Ye.P., red. izd-va; IL'IN, B.A., red.; SHIBKOVA, R.Ye., tekhn. red.

[Technology of lumbering and lumber transportation]Tekhnologiia lesozagotovok i transport lesa. [By]N.G.Korchunov i dr. Moskva, Goslesbumizdat, 1962. 501 p. (MIRA 16:3)
(Lumbering) (Lumber--Transportation)

PARFENOV, G.M.; RAKHMANKIN, S.G., red.

[Possibilities of winter transportation of lumber by motor vehicles] Rezervy zimnei vyvozki lesa avtomashinami. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovanii po lesnoi, tselliulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoz., 1964. 27 p. (MIRA 18:5)

AUTHOR: Parfenov, G.M., Docent SOV-119-58-8-10/24

TITLE: Question of a Choice in the Type of Timber Transport (K voprosu o vybore tipa lesotransporta) For Discussion Purposes (V poryadke obsuzhdeniya)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 8, pp 24-26 (USSR)

ABSTRACT: This article refers to the article by Professor S.F. Orlov published in Nr 4 (1958) of this periodical. The author finds that in almost all circumstances the building of roads must be given preference to the building of expensive narrow gauge railways, especially now when the new powerful trucks ZIL-150, ZIL-151 and MAZ-501 are available for the lumber industry.

1. Lumber--Transportation

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P[illegible], G.[illegible],

27[illegible]4

Spilv t' Derev'ya Zapodnoso S Zemley Les. Prom-st', 1949, No. [illegible], S. [illegible]-11

SO: [illegible]OFIS [illegible]. 34

PARFENOV, G. M.

Lumber - Drying

New method for natural drying of blocks for the generation of gas. Les. prom. 12 no. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952, Uncl.

1. PARFENOV, G. M., Eng.

2. USSR (600)

4. Loading And Unloading

7. Loading lumber with tractors KT-12. Les. prom. 12 no. 12 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

1. PARFENOV, G. M., Engr.

2. USSR (600)

4. Tractors

7. Loading lumber with tractors KT-12.
Les. prom. 12 No. 12, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

1. PARFENOV, G. M.

2. USSR (600)

4. Lumbering

7. Make full use of machinery. Les. prom. 12 no. 10, '52.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

PARFENOV, [illegible]

[illegible]55 . Letn[illegible] [illegible] [illegible] v usloviya[illegible] [illegible]. ([illegible])
Les. Prom-st'. 1[illegible]9, [illegible], s. [illegible]

SO: Leto[illegible]is' Z[illegible]rnal'[illegible] St[illegible], Vol. [illegible],Moskva, 1949

AUTHOR: Parfenov, G.M., Docent

SOV/3-58-11-8/38

TITLE: What Must be Done in Forestry Vuzes (chto nuzhno sdelat' v lesnykh vuzakh)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 11, pp 23 - 25 (USSR)

ABSTRACT: The gap existing between the theoretical and practical training of specialists is characteristic also of the higher educational institutions training forest technologists and forest mechanical engineers. Yet, the conditions of training at forestry vuzes are somewhat different to those in other vuzes. For the forestry engineering institute, it matters little whether the student after finishing school has worked as a conductor, letter-carrier or laborer in a factory, or whether he has come direct from the school. None of them knows anything of timber cutting. Only a man who has worked in a wood-cutting area will have the necessary experience and skill, but minors cannot be sent to such work. The author points to the disadvantages of practical training, and states that forestry engineering vuzes should be allowed to enroll both those coming direct from school and those having some practical experience. Students

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admitted to the first course should be directed to timber processing enterprises where they will work on timber cutting and wood processing machines for one year. Thus, every student will be able to acquire the basic skill and learn one or two specialties. In the author's opinion, the student should not start working on his graduation theses immediately after he has finished the theoretical course, but only when he has worked for 1-2 years as an engineer at an enterprise. For this purpose, he should get a leave of 2½ to 3 months.

ASSOCIATION: Ural'skiy lesotekhnicheskiy institut (The Urals Forestry-Engineering Institute)

PARFENOV, G. M.

27174. PARFENOV, G. M. - Srilivat' derev'ya zaroolitsc s zemley les. Prom-st! 1949, No. 8, s. 10-11

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1040

KRUSHINSKIY, L.V.; PARFENOV, G.P.

Extrapolation reflexes in ducks. Ornitologiia no.2:59-62 '59.
(MIRA 14:7)

(Ducks) (Birds--Behavior)

27 1220

S/560/61/000/010/009/016
D298/D302

AUTHORS: Glembotskiy, Ya L., Abelyeva, E A, Lapkin, Yu A., and Parfenov, G P.

TITLE: The effect of cosmic flight factors on the occurrence frequency in Drosophila Melanogaster of recessive lethal mutations in the X-chromosome

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli no. 10. Moscow, 1961, 61-68

TEXT: Reference is made to early studies of mutagenic changes under the effects of ionizing radiation. Experiments on yeast and drosophila pointed out the minimal effect of cosmic radiation on the natural mutation process. Further studies on drosophila confirmed the insignificance of cosmic radiation in spontaneous mutation. More recent studies have been undertaken by the authors on two strains of Drosophila Melanogaster--the A-32

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The effect of cosmic...

(D-32) and Д-18 (D-18)--to determine the mutagenic effect after a cosmic flight on the organism. The flight of the 2nd Sputnik lasting about 24 hr. and conducted at a height of 300 km, was used to study the effects of cosmic radiation on the heredity of the drosophila. Two types of tests were carried out: (1) to determine the occurrence frequency of recessive lethal mutations in the X-chromosome (sex-linked), and (2) to determine the occurrence frequency of dominant lethal mutations causing death in the early developmental stage of heterozygous organisms in these mutations. The mutability of the two spermatogenic stages was compared--that of the spermatid and that of the mature sperms. The frequency of induced mutations was studied, depending on the frequency of spontaneous mutations. Cross-breeding of the flies which underwent cosmic flight was performed in August 1961 to determine the sex-linked recessive lethals. The Muller-5 method was used for this purpose. The F_2 (second generation)culture percentage with no grey-red-eyed females was taken

The effect of cosmic...

as index of the occurrence frequency of recessive lethal mutations in the X-chromosomes of the females which had been in cosmic flight. In both strains (D-32 and D-18), it was found that the mutagenic effect is characterized by a statistically valid increased frequency of sex-linked recessive lethal mutations, whereby the D-18 strain (with a higher spontaneous mutability) appeared to be the more sensitive to mutagenic effect. The dotted nature of the induced mutations (20 tested cytologically) and the elevated frequency of mutation of the spermatid, as compared to the sperms, indicates their possible stipulation by cosmic radiation. It is emphasized that an accurate determination cannot be made of the role played by cosmic radiation in the mutagenic effect noted during relatively short cosmic flights. Further experiments to clarify the mutagenic effect of vibrations, acceleration, and weightlessness should be carried out. There are 1 figure, 1 table and 11 references: 2 Soviet-bloc and 9 non-Soviet-bloc. The references to the English-language publications read as follows: O. G. Fahmy,

Card 3/4

3311
D/560/61/000/010/009/016
D298/D302

The effect of cosmic...

M. I. Fahmy, Genet. Res., 1, 173, 1960; P. T. Ives, Proc. Nat Acad. Sci. USA, 45, N 2, 1959.

SUBMITTED: May 3, 1961

Card 4/4

33312
S/560/61/000/010/010/016
D299/D302

27.1220

AUTHOR: Parfenov, G. P.

TITLE: Appearance of dominant lethal mutations in Drosophila Melanogaster during space flight

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 10. Moscow, 1961, 69-71

TEXT: On the 2nd Sputnik, a flask with procreating drosophila flies was fixed; the offspring of the flies was analyzed to determine the frequency of lethal mutations. Such a test is relatively simple, as the result can be already observed in the first generation of flies. Experimental method: About 800 males and the same number of females of the wild line Д-32 (D-32) were kept in a flask, where the females deposited eggs which were collected in order to determine the dominant lethal mutations in the sperms of the males; the eggs were collected for 3 days (August 23, 24 and 25). On the evening of August 25, females

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Appearance of dominant...

of the line Yellow Muller-5 were also put into the flask, and the collection of eggs was suspended. On August 29, all the females were removed and new virgin females of the same line D-32 were added to the males. For 2 days (August 29 and 30), the eggs were collected so as to determine the dominant lethal mutations in the gametes. The induced percentage of dominant lethal mutations was determined as the difference between the number of undeveloped eggs in the test and control groups respectively. Results: Space-flight did not increase the number of dominant mutations in the gametes which were in the stage of mature sperms during the flight. In the gametes which were in the spermatid stage, a small increase in the frequency of mutations took place ($2.56 \pm 0.63\%$). As the spermatid stage is specifically radiosensitive, it could be assumed that this increase is due to cosmic radiation; the same effect, however, can result from other factors of space-flight, such as vibration, acceleration, weightlessness, or their combination. A comparison

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of data, giving the frequency of dominant lethal mutations under the effect of vibrations (in a separate laboratory experiment) and the frequency of mutations due to cosmic flight, shows that the same number of dominant lethal mutations appears in both experiments. It would be premature to assume, however, that the dominant mutations appearing in space-flight are due to vibrations only, as the laboratory conditions did not yield the same vibration spectrum as the flight conditions. The above investigation is of a preliminary character only; further investigations are required before any conclusions can be reached. There are 2 tables and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: G. A. Schaefer, J. Aviat. Med., 21, 375, 1950; A. T. Krebs, J. Aviat. Med., 21, 481, 1950; S. B. Pipkin, W. N. Sullivan, Aerospace Med., 30, 585, 1959; B. Glass, Brookhaven Sympos. Biol., N 8, 148, Brookhaven Nat. Lab., U.S. Atom. Energy Comm., 1957.

SUBMITTED: May 3, 1961

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GLEMBOTSKIY, Ya.L.; ABELEVA, E.A.; LAPKIN, Yu.A.; PARFENOV, G.P.

Effect of space flight factors on the frequency of the appearance of recessive lethal mutations in the x-chromosome of Drosophila melanogaster. Probl.kosm.biol. 1:219-231 '62. (MIRA 15:12)
(SPACE FLIGHT—PHYSIOLOGICAL EFFECT)
(VARIATION (BIOLOGY))

PARFENOV, G.P.

Appearance of dominant lethal mutations in Drosophila melanogaster during the space flight in a spaceship. Probl.kosm.biol. 1:232-235 '62. (MIRA 15:12)

(SPACE FLIGHT—PHYSIOLOGICAL EFFECT)
(VARIATION(BIOLOGY))

ANTIPOV, V.V.; BAYEVSKIY, R.M.; GAZENKO, O.G.; GENIN, A.M.; GYURDZHIAN, A.A.; ZHUKOV-VEREZHNIKOV, N.N.; ZHURAVLEV, B.A.; KARPOVA, L.I.; PARFENOV, G.P.; SERYAPIN, A.D.; SHEPELEV, Ye.Ya.; YAZDOVSKIY, V.I.

Some results of medicobiological investigations in the second and third spaceships. Probl.kosm.biol. 1:267-284 '62.
(MIRA 15:12)

(SPACE MEDICINE) (SPACE BIOLOGY)

GLEMBOTSKIY, Ya.L.; PARFENOV, G.P.

Effect of space flight factors on some biological indices in insects. Probl.kosm.biol. 2:98-115 '62. (MIRA 16:4)
(SPACE FLIGHT--PHYSIOLOGICAL EFFECT)
(DROSOPHILA) (GENETICS)

KOVYAZIN, N.V.; LUKIN, A.A.; PARFENOV, G.P.

Effect of the factors of space flight in the Vostok-2 space-ship on haploid and diploid yeast organisms. Probl.kosm.biol. 2:149-152 '62. (MIRA 16:4)

(SPACE FLIGHT--PHYSIOLOGICAL EFFECT)
(YEAST) (CHROMOSOME NUMBERS)

ABELEVA, E.A.; PARFENOV, G.P.; LAPKIN, Yu.A.

Crossing-over of Drosophila Melanogaster males caused by the space flight factors. Isk.sput.Zem. no.13:119-122 '62. (MIRA 15:7)

(Space biology)

PARFENOV, G.P.

S/560/62/000/013/008a/009

AUTHOR: Kovyazin, N. V., A. A. Lukin, and G. P. Parfenov

TITLE: Effect of factors in the flight of the spaceship-satellite "Vostok-2" on microorganisms (investigation of yeast organisms with various ploid numbers)

PERIODICAL: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli, no. 13, 1962, 123-129

TEXT: Experiments were conducted with true haploid *Zygosaccharomyces Bailii* and diploid *Saccharomyces vini* (Megri 139-B strain) yeast cells grown in agar cultures and placed in aqueous suspensions. Small concentrations of oleic acid ($47 \cdot 10^{-2}$ to $47 \cdot 10^{-8}$%) were added to some of the suspensions as a sensitizing agent. Spaceflight factors had no adverse effect on either haploid or diploid cells in the absence of oleic acid. However, the addition of $47 \cdot 10^{-8}$% oleic acid caused a sharp increase in the sensitivity of haploid cells to these

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factors; their survival rate fell to 50.6%. No such effect was noted on diploid cells. It is concluded that the resistance to spaceflight factors of yeast cells in the presence of oleic acid is dependent on their ploid numbers.

ACCESSION NR: AT4042681 S/0000/63/000/000/0185/0188

AUTHOR: Zhukov-Verezhnikov, N. N.; Mayskiy, I. N.; Yazdovskiy, V. I.; Pekhov, A. P.; Ry*bakov, N. I.; Tribulev, G. P.; Saksonov, P. P.; Dobrov, N. N.; Antipov, V. V.; Kozlov, V. A.; Vy*sotskiy, V. G.; Mishenko, B. A. Ry*bakova, D. K.; Parfenov, G. P.; Pantyukhova, V. V.; Yudin, Ye. V.; Aniskin, Ye. D.

TITLE: The evaluation of the biological effectiveness of space-flight factors with the aid of lysogenic bacteria

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 185-188

TOPIC TAGS: lysogenic bacteria, biological sensor, radiation detector, bacteriophage, phage, vibration, irradiation/Vostok III, Vostok IV

ABSTRACT: Lysogenic bacteria, E. coli K-12 (λ), was carried on spaceships

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ACCESSION NR: AT4042681

Vostok III and Vostok IV as a biological sensor. The advantages of lysogenic bacteria as biological sensors stem not only from their extreme sensitivity to various types of radiation, but also from the fact that induced changes are directly proportional to the dose of irradiation. In addition, E. coli was subjected to the combined effects of radiation and vibration in ground experiments. Vibration was produced by means of a vibrator with frequencies of 35, 70, and 700 cps, an amplitude ranging from 0.4 to 0.005 mm with a load equal to 10 g, for periods of 15, 30, and 60 min. Co^{60} in doses of 100 r at a rate of 21 r per min served as a source of radiation. Lysogenic bacteria carried on spaceships Vostok III and Vostok IV revealed induction of genetic changes produced by space-flight factors which was indicated by a significant increase in the number of phage particles. The induced effect was more pronounced on Vostok III than on Vostok IV. Forty-eight hours after its return to earth, the bacteria carried by Vostok III had produced 4.6 times as many phage particles as controls which had remained on earth. Ground experiments with vibration indicate that the combined vibration and gamma irradiation, followed by a second exposure to vibration, double the biological effectiveness of gamma rays.

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However, when the bacteria is subjected to only a single dose of vibration following irradiation, there is no increase in the number of phage particles as compared to samples which were exposed to irradiation alone. This fact indicates that under space flight conditions vibration sensitizes the lysogenic bacteria to the effect of ionizing radiation. This as yet hypothetical explanation should be substantiated by additional experiments.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 3/3

PARFENOV, G.P.

Emergence of crossing-over in Drosophila males after the [illegible] of vibration, acceleration and gamma irradiation. [illegible] no.4:643-653 Jl-Ag '64.

GLEMBOTSKIY, Ya.L.; PARFENOV, G.P.; LAPKIN, Yu.A.

Influence of space flight factors on the frequency of occurence of sexlinked recessive lethal mutations in Drosophila melanogaster. Isk.sput.Zem. no.15:113-119 '63. (MIRA 16:4)
(Space biology)

GLEMBOTSKIY, Ya.L.; LAPKIN, Yu.A.; PARFENOV, G.P.; KAMSHILOVA, Ye.M.

Effect of cosmic flight factors on the frequency of occurrence of sex-interlinked recessive lethal mutations in Drosophila melanogaster. Kosm. issl. 1 no.2:327-334 S-O '63.
(MIRA 17:4)

ACCESSION NR: AP4034805 S/0293/64/002/002/0320/0329

AUTHOR: Delone, N. L.; By*kovskiy, V. F.; Antipov, V. V.; Parfenov, G. P.; Vy*sotskiy, V. G.; Rudneva, N. A.

TITLE: Effect of Vostok-5 and Vostok-6 space flights on Tradescantia paludosa microspores

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 2, 1964, 320-329

TOPIC TAGS: space flight, Vostok 5, Vostok 6, microspore, mitosis, vibration, acceleration, weightlessness, Tradescantia

ABSTRACT: Exposure of Trandescantia microspores to orbital flights in Vostok-5 and Vostok-6 spaceships adversely affected the mitotic mechanism. Cytological analysis of the samples revealed five types of abnormalities: Type I, incomplete mitosis due to nondisjunction of chromosomes; Type II, "rosette" chromosome alignment on the metaphase plate; Type III, nondisjunction aberrations in spindle orientation (the nuclei in the experimental and in the control spores are located in different planes); Type IV, nondisjunction of chromosomes or delayed telophase; Type V, multipolar mitosis leading to the formation

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ACCESSION NR: AP4034806 S/0293/64/002/002/0330/0334

AUTHOR: Parfenov, G. P.

TITLE: Development of the organism under conditions of weightlessness

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 2, 1964, 330-334

TOPIC TAGS: Vostok 3, Vostok 4, space flight, hereditary space flight effect, mutation, lethal mutation, Drosophila melanogaster, weightlessness, embryogenesis, sex ratio, ontogenetic anomaly, phylogenetic anomaly, copulation, oviposition

ABSTRACT: The effects of fertilization and oviposition under weightless conditions on the offspring of Drosophila melanogaster were investigated on Vostok-3 and Vostok-4. Before launch males and virgin females were placed in separate 20 ml beakers. During the first orbit the beakers were placed together, permitting the flies to copulate. Eggs laid under weightless conditions were kept distinct from those laid after landing. The author finds that all changes observed in the

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ACCESSION NR: AP4034806

rate of embryonal development, survival, and size (weight) of offspring may be due to one or another of several changed experimental conditions: lower incubation temperature, denser nutrient medium, and culture more crowded than usual. Offspring of the flown flies showed certain developmental anomalies: absence of half the thorax, absence of macrochaetae on one side, small size and roughness of one eye, and shortening and improper veining of one wing. A number of similar anomalies was also observed in the controls. The question of the induction of morphoses by spaceflight factors cannot be regarded as settled. Altered sex ratios (64.94% females to 35.06% males) are ascribed to accumulation of recessive lethal factors in the sex chromosomes of the females, and selective injurious effects of spaceflight on sperm with y-chromosomes. Since development of males is slower, the culture conditions inhibited their development more sharply, which also caused losses in the larval stage. It is considered to be demonstrated that copulation, oviposition, and normal development of Drosophila is possible under conditions of weightlessness, and that the development of normal strains of Drosophila during several days of weightlessnes caused no statistically reliable increase in morphoses or gamete mutations. Orig. art. has: 2 tables.

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ACCESSION NR: AP4034807 S/0293/64/002/002/0335/0340

AUTHOR: Parfenov, G. P.

TITLE: Causes of gamete lethality in Drosophila following flights on the Vostok-3 and Vostok-4 satellites

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 2, 1964, 335-340

TOPIC TAGS: Drosophila, sputnik, Vostok 3, Vostok 4, radiation, mutation, sterilization, gamete, vibration, temperature

ABSTRACT: Out of 17 studies of the frequency of dominant lethal mutations in the gametes of sputnik-flown Drosophila males, only one (the second unmanned sputnik) showed a statistically reliable increase in the mortality of eggs fertilized by flown males. The greatest increase in lethals (2.63%) was observed in the spermatids of males flown in the fourth sputnik. Although the longer flights of Vostok-3 and Vostok-4 meant a 100-fold greater exposure to radiation and a 70-fold increase in exposure to weightlessness, the present studies revealed no corresponding increase in the frequency of lethals, from which it is concluded that these two factors are not involved. The theory that vibration may cause dominant lethal mutations in males

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ACCESSION NR: AP4034807

seemed to be supported by increased egg mortality following exposure of the fertilizing males to vibration in ground experiments. There are two possible explanations for the small but continuous and stable increase in egg mortality: 1) that vibration induces "quasi-sterility" (i.e., a temporary reduction in intensity of sexual activity of the males), or 2) that vibration or acceleration does have a deleterious effect on spermiogenesis. The fact that the frequency of egg mortality following exposure of females to space flight remained fairly constant for the whole period of the experiment and that the dose involved was small argues against radiation as the cause of dominant lethals in females. The most probable explanation is thermal shock: the experimental group was accidentally left for several days in the spaceship after landing, and it is entirely possible that the females were exposed to partially sterilizing temperatures during this time. Temporary curtailment of sexual activity in males and partial sterilization due to temperature effects in males and females account for the number of unfertilized eggs which were tallied in accordance with the experimental method as "dominant lethal mutations." The term "dominant lethal mutation" must be regarded as having only a methodological significance in the present study. Orig. art. has: 4 tables.

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